

U.S. Patent Application Serial No. 10/615,386
Amendment filed April 7, 2006
Reply to OA dated January 20, 2006

REMARKS

The applicant respectfully submits that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated January 20, 2006.

At the outset, the applicant thanks the Examiner for now indicating that claims 3 - 5 would be allowable if rewritten in the manner suggested in item 5, page 4 of the outstanding Action. The applicant respectfully submits however that, for the reasons more fully discussed below, to amend the claims in the manner suggested by the Examiner would unnecessarily narrow or limit the scope of the claims to which the applicant regards as his invention.

As to the Examiner's comment to the title of the invention as not clearly indicative of the applicant's invention, the applicant requests that the amended title of the invention, as submitted herewith, be approved by the Examiner.

The drawings have been objected to for the reason set forth in item 3, page 2 of the outstanding Action. In amended Figures 3 and 4, submitted herewith, the block boxes have been labeled, as requested by the Examiner.

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As to the merits of this case, claims 1, 2, 6 and 7 stand rejected under 35 USC 102(e) based on Kuroda (EP 0 930 617). The applicant respectfully requests reconsideration of this rejection.

The applicant's claimed invention, as recited in independent claim 1, is directed to a recording clock signal generating apparatus located in an information recording device for recording information in a recording medium in which a wobbled information recording track and pre-pit formed thereon. The claimed apparatus includes a wobble signal detecting section for detecting a wobble signal; a pre-pit signal detecting section for detecting a pre-pit signal; a phase comparing section for comparing a phase of the wobble signal to that of the pre-pit signal and outputting the phase difference; a phase-shifting section for shifting a phase of the wobbled signal based on the phase difference only when the phase difference is within a predetermined range; and a clock signal generating section for generating a recording clock signal based on the phase-shifted wobble signal.

Significant distinguishable structural arrangements of the applicant's claimed recording clock signal generating apparatus, as recited in claim 1, include the claimed pre-pit signal detecting section for detecting a pre-pit signal; the claimed phase comparing section for comparing a phase of the wobble signal to that of the pre-pit signal and outputting the phase difference; and the claimed phase-shifting section for shifting a phase of the wobbled signal based on the phase difference only when the phase difference is within a predetermined range.

The applicant's claimed invention, as recited in independent claim 7, is directed to a recording clock signal generating method for recording information in a recording medium in which a wobbled information recording track and a pre-pit formed thereon. The claimed method, as now recited in claim 7, includes the steps of detecting a wobble signal; detecting a pre-pit signal; comparing a phase of the wobble signal to that of the pre-pit signal and outputting the phase difference; shifting a phase of the wobble signal based on the phase difference only when the phase difference is within a predetermined range; and a clock signal generating step of generating a recording clock signal based on the phase-shifted wobble signal.

Significant distinguishable features of the applicant's claimed recording clock signal generating method, as set forth in claim 7, includes the claimed steps of comparing a phase of the wobble signal to that of the pre-pit signal and outputting the phase difference; and thereafter, shifting a phase of the wobble signal based on the phase difference only when the phase difference is within a predetermined range.

The applicant's claimed invention improves the accuracy of synchronization of the wobble signal and the pre-pit signal, wherein inaccurate pre-pit signal (due to a defect on a disk) is determined and ignored when the difference between the phase of the wobble signal and the phase of the pre-pit signal is out of a predetermined range. Accordingly, in the applicant's claimed

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invention, there exists the claimed phase comparing section for comparing the phase of the wobble signal to the phase of the pre-pit signal, a significant structural arrangement or feature of the claimed invention, which is lacking in the teachings of Kuroda.

With respect to the cited reference, the applicant traverses the Examiner's assertion that the above-discussed distinguishable claimed structural arrangement or feature is disclosed in Kuroda. The European patent to Kuroda, owned by Pioneer Corporation (the same assignee in the instant U.S. patent application), teaches a phase matching circuit 80 for synchronizing the phases of the writing clock signal WCK and the reproduced clock signal RCK. What is shown in the cited part of the reference is jitter-removal of the wobble signal based on the pre-pit signal ([0048] and [0049]) and PLL control for generating writing clock signal WCK0 ([0040]). In this regard, Kuroda surely teaches a "phase comparator 71" ([0050]). However, the phase comparator 71 compares the cross-talk removed wobble signal with a signal of frequency equivalent to the wobble signal outputted by a frequency divider 74 ([0050]), Fig 11: Such arrangement corresponds to the third phase comparator 211 of the wobble PLL circuit 210 of the present invention). As clearly recited in the reference ([0049]), the pre-pit signal is inputted to the cross-talk removing circuit 65 and a pre-pit (LLP) decoder 66, which by no means is phase-compared with the wobble signal." In other words, there is no teaching Kuroda of the "phase comparing section" for comparing the phases of the pre-pit signal and the wobble signal, as set forth in each of independent claims 1 and 7.

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In view of the above, not all of the claimed elements or features, as set forth in independent claims 1 and 7, are found in exactly the same situation and united in the same way to perform the identical function in Kuroda's apparatus. Thus, there can be no anticipation under 35 USC 102(e) of the applicant's claimed invention, as recited in each of independent claims 1 and 7, based on Kuroda.

Furthermore, claims 2 and 6 depend on claim 1, and further limit the scope of claim 1. Thus, for the reasons set forth above with respect to claim 1, claims 2 and 6 should now be similarly allowable.

Accordingly, the withdrawal of the outstanding anticipation rejection under 35 USC 102(e) based on Kuroda (EP 0 930 617) is in order, and is therefore respectfully solicited.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicant's undersigned attorney at the telephone number indicated below in order to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Replacement Sheets of Drawings (Figs. 3 and 4)
Annotated Sheets of Drawings (Figs. 3 and 4)

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AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes changes to Figures 3 and 4. This sheet, which includes Figures 3 and 4, replaces the original sheet including Figures 3 and 4.

In Figures 3 and 4, the block boxes have been labeled, as requested by the Examiner.



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FIG. 4



